

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/37242

A. CLASSIFICATION OF SUBJECT MATTER			
IPC(7) : B66B 5/00 US CL : 187/287, 288, 350, 373, 374, 376; 188/188,189 According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
Minimum documentation searched (classification system followed by classification symbols) U.S. : 187/287, 288, 350, 373, 374, 376; 188/188,189			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched None			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) None			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
Y	US 5,492,200 A (KORHONEN) 20 February 1996 (20.02.1996), see entire document.	1-20	
Y	US 5,653,312 A (KATO) 05 August 1997 (05.08.1997), see entire document.	1-20	
A	US 5,217,091 A (SHIINA et al) 08 June 1993 (08.06.1993), see figure 1.	1-20	
A	US 5,377,786 A (NAKAGAWA) 03 Januray 1995 (03.01.1995), see figures 3-5.	1-20	
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		See patent family annex.	
* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
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"P" document published prior to the international filing date but later than the priority date claimed			
Date of the actual completion of the international search 05 March 2004 (05.03.2004)		Date of mailing of the international search report 10 MAY 2004	
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer <i>Jedidiah Jackson, Jr.</i> Jonathan Salata Telephone No. 703-308-0956	